

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF HAMPRECHT ET AL.

SERIAL NO. 10/551,998

FILED: APRIL 06, 2004

PRIORITY: APRIL 08, 2003

FOR: BENZENESULPHONEAMIDE DERIVATIVES AS HERBICIDES OR DESICCANT / DEFOLIANT
COMPOUNDS

DECLARATION

I, Robert Reinhard, a doctor of natural sciences, a citizen of the Federal Republic of Germany and residing at 06, Benwardtstraße, 67117 Limburgerhof, Germany, declare as follows:

I am a fully trained chemist, having studied chemistry at the University of Kaiserslautern, Germany, from 1986 to 1994;

I was awarded my doctor's degree by the University of Kaiserslautern in 1994;
I was a post-doctoral fellow at the Center of Light Microscope Imaging and Biotechnology, Pittsburgh, Pennsylvania from 1994 to 1996;

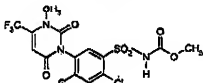
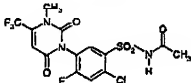
Since 1996, when I joined BASF SE of 67056 Ludwigshafen, Germany, I have been engaged in the synthesis of herbicides and herbicide screening, and I am therefore fully conversant with the technical area to which application Serial No. 10/551,998 pertains;

I have studied the Office Action dated May 27, 2008 that has issued in this case and read the references therein, particularly *Strunk et al.* (US 5,169,430) applied by the Examiner.

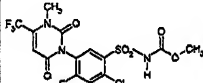
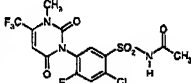
In order to show the herbicidal action of the inventive benzenesulfonamide derivatives we carried out some experiments as described in Application No. 10/551,998 (see page 122, line 30 to page 123, line 25). The plants used in these greenhouse experiments belong to the following species:

Scientific name	Common name
<i>Amaranthus retroflexus</i>	common amaranth
<i>Abutilon theophrasti</i>	velvetleaf
<i>Chenopodium album</i>	lambsquarters
<i>Commelina benghalensis</i>	common dayflower
<i>Galium aparine</i>	catchweed
<i>Polygonum persicaria</i>	ladysthumb

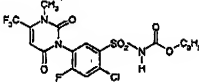
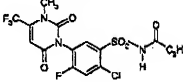
Tab. 1 Comparison of the herbicidal activity of compound 3.18 of the present invention and compound A known from Strunk et al. (US 5,169,430) at an application rate of 7.81 g/ha and 3.91 g/ha pre emergence (greenhouse)

compound	compound 3.18		compound A	
				
application rate (g/ha)	7.81	3.91	7.81	3.91
unwanted plant	damages (%)			
<i>Amaranthus retroflexus</i>	100	100	0	0

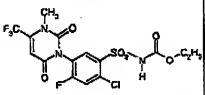
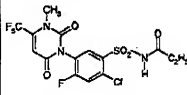
Tab. 2 Comparison of the herbicidal activity of compound 3.18 of the present invention and compound A known from Strunk et al. (US 5,169,430) at an application rate of 7.81 g/ha and 3.91 g/ha post emergence (greenhouse)

compound	compound 3.18		compound A	
				
application rate (g/ha)	7.81	3.91	7.81	3.91
unwanted plant	damages (%)			
<i>Abutilon theophrasti</i>	100	100	60	30
<i>Amaranthus retroflexus</i>	100	100	50	40
<i>Chenopodium album</i>	100	100	100	75
<i>Polygonum persicaria</i>	100	100	100	20

Tab. 3 Comparison of the herbicidal activity of compound 3.19 of the present invention and compound B known from Strunk et al. (US 5,169,430) at an application rate of 7.81 g/ha and 3.91 g/ha pre emergence (greenhouse)

compound	compound 3.19		compound B	
				
application rate (g/ha)	7.81	3.91	7.81	3.91
unwanted plant	damages (%)			
<i>Amaranthus retroflexus</i>	100	100	0	0

Tab. 4 Comparison of the herbicidal activity of compound 3.19 of the present invention and compound B known from Strunk et al. (US 5,169,430) at an application rate of 7.81 g/ha and 3.91 g/ha post emergence (greenhouse)

compound	compound 3.19		compound B	
				
application rate (g/ha)	7.81	3.91	7.81	3.91
unwanted plant	damages [%]			
Commelina benghalensis	100	100	85	75
Galium aparine	100	100	60	25
Polygonum persicaria	100	100	70	25

The test data clearly indicate that the replacement of the alkylcarbonyl-aminosulfonyl side chain (known from Strunk et al.) by an alkoxycarbonyl-aminosulfonyl side chain results in a superior herbicidal activity compared to the compounds known from Strunk et al.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information or belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 101 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at 87117 Limburgerhof, Germany, this ²⁴..... day of September, 2008.



Signature of Declarant

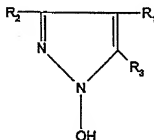
Both catalysts share a common component and a common activity as oxidation catalyst for RCH_3 . With $(X + a)$ the oxidation is more complete and goes until the carboxylic acid is formed but the activity still remains the same.

A Markush grouping is acceptable.

IV. INTERMEDIATE/FINAL PRODUCTS

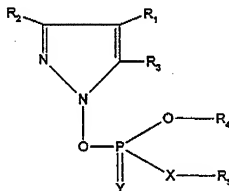
Example 25

Claim 1:



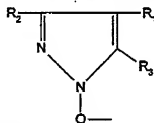
(intermediate)

Claim 2:



(final product)

The chemical structures of the intermediate and final product are technically closely interrelated. The essential structural element incorporated into the final product is:



Therefore, unity exists between claims 1 and 2.